

REMARKS

By this amendment, claims 1-8 and 13-20 have been revised to place this application in condition for allowance. Currently, claims 1-8 and 13-20 are before the Examiner for consideration on their merits.

In review, the C content of the claims is narrowed to an upper limit of 0.09%. No new matter is introduced by this amendment since support for this amount is found in Table 1, Steel E of the specification. The claims are also amended in the first and second lines thereof in response to the Examiner's allegation of indefiniteness.

In light of the changes to the claims, Applicants traverse the rejections and the traverses are set out below under the appropriate heading.

35 USC §112, second paragraph

In the Office Action, the Examiner alleged that the claims were indefinite by reciting the yield strength in two different parts of the claims. The Examiner took the position that if yield strength A does not equal yield strength B, then the claims are drawn to a steel at two different points in the process, i.e., a final steel product and an intermediate steel product. Thus, the scope of the claims is unclear.

All claims have been revised to remove the initial recitation of the yield strength from the claims. As a result of this change, the Examiner's observation that the claims are unclear by suggesting that two different products are claimed is no longer apt. As such, the rejection of the claims based on 35 USC §112, second paragraph, should be withdrawn.

35 USC §103

In this rejection, the Examiner alleges that a prima facie case of obviousness is present based on JP '823 based on an overlap in composition and similarity in processing that supports a position that the limitations of the claims not expressly stated in JP '823 are inherent.

Applicants submit that the rejection is no longer valid since an overlap in composition no longer exists between JP '823 and the claims. That is, the upper limit of C is now defined as 0.09%. The question becomes whether JP '823 teaches a C content that would be either at 0.09% or lower so as to permit the Examiner to say that an overlap still occurs between JP '823 and the claims.

In the rejection, the Examiner identifies a C content range of 0.10-0.18% for JP '823. All of the claims define a C upper limit of 0.09%. Therefore, there is no technical overlap between JP '823 and the claims.

The next question is whether the Examiner can say that JP '823 can be modified in terms of the C content or that 0.10% is sufficiently close to 0.09% that they are essentially the same.

Applicants submit that JP '823 teaches away from lowering the C content to below 0.10%. Paragraph [0009] of the translation of JP '823 indicates that properties degrade, particularly hot working nature, when the C content is lower than 0.10%. This is a clear teaching away to one of skill in the art to lower the C content of JP '823.

JP '823 also suggests that properties change when the C content goes below 0.10%. This means that this lower limit is a property changing threshold limit. Therefore, the Examiner cannot say that there is no difference between an alloy that has C content of 0.09% and one that has a C content of 0.10%. JP '823 itself says that lowering the C content below 0.10% changes the alloy.

For the foregoing reasons, Applicants submit that JP '823 no longer establishes a prima facie case of obviousness against any of the claims now pending in this application. As such, the rejection of claims 1-8 and 13-20 should be withdrawn.

35 USC §112, first paragraph, written description

This rejection applies to the claim limitation "a yield strength of the steel after cooling by quenching or air cooling in a final treatment after final heating at a temperature of the A_{c3} point or more is not less than 815 MPa."

The Examiner's position is that since Table 2 of the specification recites yield strengths that are less than 815 MPa, i.e., a yield strength of 813 MPa is disclosed for Test No. 13, Applicants are not entitled to specify a yield strength that is greater than the lowest disclosed yield strength.

Applicants submit that the Examiner has erred as a matter of law in making this rejection. The test for written description is "whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." Applicants have disclosed a number of steels with varying yield strengths as part of the invention. In

this instance, Applicants have chosen to limit the scope of their claims to a value that is not as broad as that described. There is no proscription against this practice under 35 USC §112, first paragraph. The written description requirement means that the claims must be described; it does not say how the Applicants must use what is described in the claims.

The Examiner's position is tantamount to saying that Applicants cannot narrow the scope of their invention even though the value being claimed for narrowing purposes is expressly disclosed in the application. The Examiner has offered no legal basis for such a restriction and, in fact, there is none; Applicants are always entitled to narrow the scope of their invention provided that 35 USC §112 is satisfied. As such, the rejection based on 35 USC §112, first paragraph, and the written description requirement is not valid and should be withdrawn.

Claim Rejection - 35USC 112, first paragraph enablement

The Examiner also makes an enablement rejection on the grounds that Applicants are not permitted to define the yield strength in an open ended manner. More particularly, the Examiner contends that the specification does not teach or suggest how to make a steel, that encompasses a yield strength value that far exceeds that which is disclosed. As an example, the Examiner argues that the claims read on a yield strength of 10,000 MPa and there is no disclosure in the specification that supports such breadth in the claims.

Applicants submit that the Examiner has also erred as a matter of law in making this rejection.

The Examiner notes that the specification does not expressly say that the yield strength is "not less than 815 MPa." Applicants do not dispute this observation by the Examiner. However, even if the specification were to say "not less than 815 MPa," the Examiner's reasoning that the claim still is open ended and there is no disclosure to cover this open ended scope would apply.

What the Examiner is saying is that an open ended claim can never be enabled. Applicants submit that this stance is just not correct. First, the PTO issues patents with open end claims all of the time. The Examiner himself has issued patents in the metallurgical field with open ended limitations concerning strength properties, see United States Patent Nos. 7,615,126 and 7,604,704.

A patent claim is presumed enabled unless proven otherwise by clear and convincing evidence." *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1317-18 (Fed. Cir. 2007). The enablement requirement does not "say that the specification . . . must necessarily describe how to make and use every possible variant of the claimed invention, for the artisan's knowledge of the prior art and routine experimentation can often fill gaps, interpolate between embodiments, and perhaps even extrapolate beyond the disclosed embodiments, depending upon the predictability of the art." *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1244 (Fed. Cir. 2003)1244; see also *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997) ("[A] specification need not disclose what is well known in the art."). However, "it does mean that, when a range is

claimed, there must be *reasonable enablement of the scope of the range.*" *AK Steel Corp.*, 344 F.3d at 1244 (emphasis added). "Open-ended claims are not inherently improper; . . . [t]hey may be supported if there is an inherent, albeit not precisely known, upper limit and the specification enables one of skill in the art to approach that limit." *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1572 (Fed. Cir. 1991).

In the field of metallurgy and particularly in the field of martensitic stainless steels, the ability to obtain increases in yield and tensile strength is not measured in orders of magnitude as the Examiner suggests, e.g., the application encompasses 10,000 MPa yield strength. To the contrary, the ability to obtain high yield strength levels in the field of martensitic stainless steels is one that is measured in small steps not the leaps assumed to be possible by the Examiner. The field of martensitic stainless steels is a mature one that advances incrementally. Applicants submit that a review of the general prior art in the field of martensitic stainless steels would reveal the incremental advances, including the upper limit for the strengths of these steels, which may not be known exactly, but are fairly well recognized by one of skill in the art. As such, having an open ended claim limitation with respect to yield strength does not define a value that sets an unreasonable scope for the claim.

If the Examiner would persist in maintaining this rejection, Applicants would be glad to provide additional evidence to show that an open ended yield strength limitation in the field of martensitic stainless steels is not one is subject to the scope postulated by the Examiner.

Summary

In light of the revisions to the claims, the rejection based on 35 USC §103 is no longer valid. In light of the revision to the claims and removal of the initial reference to yield strength, the claims are definite under the purview of 35 USC §112, second paragraph. Lastly, the specification does not lack enablement with respect to the open ended claim limitation concerning yield strength.

In light of this response, the Examiner is respectfully requested to examine this application in light of this amendment, and pass claims 1-8 and 13-20 onto issuance.

If the Examiner believes that a further interview with Applicants' attorney would be helpful in expediting prosecution of this application, the Examiner is respectfully requested to telephone the undersigned at 202-835-1753.

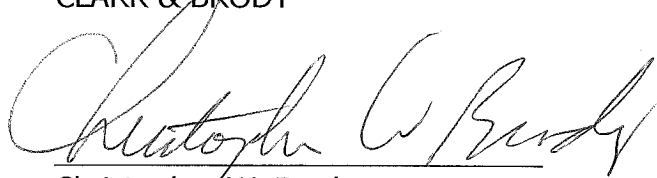
Again, reconsideration and allowance of this application is respectfully requested.

The above constitutes a complete response to all issues raised in the outstanding Office Action.

A petition for a one month extension of time is made. Please charge the fee of \$130.00 to Deposit Account No. 50-1088.

Please charge any fee deficiency or credit any overpayment to Deposit Account
No. 50-1088.

Respectfully submitted,
CLARK & BRODY

A handwritten signature in cursive script, appearing to read "Christopher W. Brody", written over a horizontal line.

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